

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Jeffrey J. Richmond on October 7, 2008.

3. The application has been amended as follows:

Claim 1. (Currently Amended) A method for fault management in a distributed network management station comprising:

initiating a first device coupled to a network;

determining a status of the first device as a master device of the network or a slave device of the network by:

broadcasting, from the first device, an information packet over the network, the information packet indicating whether the first device had a prior status as a master device in a previous operational period,

listening, at the first device, for one or more responses to the information packet from one or more second devices coupled to the network, the one or more responses indicating a current state of the corresponding second devices as either master or slave devices of the network, and a prior status of the corresponding second devices as master devices in previous operational periods, wherein the information packet further comprises information regarding a total system-up-time of the first device and the responses indicate information regarding corresponding total system-up-times of the one or more second devices, the total system-up-times of the first device and the one or more second devices to indicate a total time the corresponding first device or one or more second devices have been in an operational mode, and

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~~resolving the status of the first device as the master device or slave device of the network based, at least in part, on any responses received from the one or more second devices coupled to the network~~

comparing the total system-up-times of the first device and the one or more second devices, and

determining the first device is the master device of the network or slave device of the network according to the comparison of the total system-up-times.

Claim 2. (Previously Presented) The method as recited in Claim 1, wherein said first device automatic initiates as a slave device.

Claim 3. (Original) The method as recited in Claim 1, wherein said information packet comprises a participating-device internet protocol (IP) of said first device.

Claim 4. (Original) The method as recited in Claim 3, wherein said information packet also comprises a participating-device message authentication code (MAC) of said first device.

Claim 5. (Previously Presented) The method as recited in Claim 1, further comprises determining the first device is the master of the network when no responses were received to the information packet.

Claim 6. (Previously Presented) The method as recited in Claim 1,
wherein said information packet additionally comprises information regarding a current state of said first device as a slave device of the network; and

determining the first device is the master device of the network based, at least in part, on any responses received from the one or more second devices coupled to the network.

Claim 7. (Previously Presented) The method as recited in Claim 1, further comprises:
comparing the prior status of the first device with the prior status of the one or more second devices received in the response to the information packet when one of the second

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devices is not currently the master device of the network according to the received responses;
and

determining the first device is the master device of the network or a slave device of the network according to the comparison of the prior status of the first device with the prior status of the one or more second devices.

Claim 8. (Canceled)

Claim 9. (Original) The method as recited in Claim 1, wherein said distributed network management station integrates plug-and-play capability of each of the plurality of devices into said network.

Claim 10. (Original) The method as recited in Claim 1, wherein said distributed network management station integrates scalability of each of the plurality of devices into said network.

Claim 11. (Original) The method as recited in Claim 1, wherein said distributed network management station integrates self-healing capabilities of each of the plurality of devices into said network.

Claim 12. (Currently Amended) A method for fault management in a distributed network management station comprising:

determining a status of a first device as a master device of a network or a slave device of the network by:

broadcasting, from the first device, an information packet over the network, the information packet indicating whether the first device had a prior status as a master device in a previous operational period,

listening, at the first device, for one or more responses to the information packet from one or more second devices coupled to the network, the one or more responses indicating a current state of the corresponding second devices as either master or slave devices of the network, and a prior status of the corresponding second devices as master

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devices in previous operational periods, wherein the information packet further comprises information regarding a total system-up-time of the first device and the responses indicate information regarding corresponding total system-up-times of the one or more second devices, the total system-up-times of the first device and the one or more second devices to indicate a total time the corresponding first device or one or more second devices have been in an operational mode, and

~~resolving the status of the first device as the master device or slave device of the network based, at least in part, on any responses received from the one or more second devices coupled to the network~~

comparing the total system-up-times of the first device and the one or more second devices, and

determining the first device is the master device of the network or a slave device of the network according to the comparison of the total system-up-times; and

initiating a fail-over process, wherein said fail-over process results in at least one of said slave devices re-evaluating which device coupled to the network is said master device.

Claim 13. (Previously Presented) The method as recited in Claim 12, wherein said information packet broadcast by said first device further comprises:

transmitting a participating-device internet protocol (IP) of said first device; transmitting a participating-device message authentication code (MAC) of said first device;

transmitting information regarding the previous state of said first device; transmitting information regarding the current state of said first device; and transmitting information regarding the total system-up-time of said first device.

Claim 14. (Canceled)

Claim 15. (Original) The method as recited in Claim 12, wherein said distributed network management station integrates plug-and-play capability of each of the plurality of devices into said network.

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Claim 16. (Original) The method as recited in Claim 12, wherein said distributed network management station integrates scalability of each of the plurality of devices into said network.

Claim 17. (Original) The method as recited in Claim 12, wherein said distributed network management station integrates self-healing capabilities of each of the plurality of devices into said network.

Claim 18. (Previously Presented) The method as recited in Claim 12, wherein said re-evaluation by the slave device occurs due to a loss of communication with said master device.

Claim 19. (Previously Presented) The method as recited in Claim 18, wherein said re-evaluation by the slave device comprises questioning said master device for state or status.

Claim 20. (Previously Presented) The method as recited in Claim 19, wherein said state or status of said master device comprise at least one of said master device in a paused state, said master device in a crashed state, transmission control protocol (TCP) disconnect from said master device, or overall loss of master device.

Claim 21. (Currently Amended) A computer system comprising:
a bus;
a memory unit coupled to the bus; and
a processor coupled to the bus, the processor to broadcast an information packet over a network, the information packet indicating whether the computer system had a prior status as a master device in a previous operational period, to listen for one or more responses to the information packet from at least another device coupled to the network, the one or more responses indicating a current state of the corresponding other device as either master or slave device of the network, and a prior status of the corresponding other device as a master device in previous operational periods, ~~and to resolve the status of the computer system as the master device or slave device of the network based, at least in part, on any responses received from the other device coupled to the network, wherein the information packet further comprises~~

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information regarding a total system-up-time of the computer system and the responses indicate information regarding corresponding total system-up-time of the other device, the total system-up-times of the computer system and the other device to indicate a total time the computer system or other device have been in an operational mode, the processor to compare the total system-up-times of the computer system and the other device and determine the computer system is the master device of the network or the slave device of the network according to the comparison of the total system-up-times.

Claim 22. (Previously Presented) The computer system of Claim 21, wherein said information packet comprises at least one of a participating-device internet protocol (IP) of said computer system, a participating-device message authentication code (MAC) of said computer system, or information regarding the total system-up-time of said first device.

Claim 23. (Canceled)

Claim 24. (Previously Presented) The computer system of Claim 21, wherein said distributed network management station comprises at least one of plug-and-play capability of said computer system, scalability of said computer system or self-healing capability of said computer system.

Claim 25. (Previously Presented) The computer system of Claim 21, wherein the processor is configured to re-evaluate the status of the computer system as the master device or slave device of the network when the computer system as a slave device, loses communication with the master device.

Claim 26. (Previously Presented) The computer system of Claim 21, wherein the processor configured to resolve the status of the computer system by:

comparing the prior status of the computer system with the prior status of the other device received in the response to the information packet, and

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determining the first device is the master device of the network or the slave device of the network according to the comparison.

Claim 27. (Previously Presented) The computer system of Claim 26, wherein said state or status of said master device comprise at least one of:

- a paused state;
- a crashed state;
- a transmission control protocol (TCP) disconnect; or
- overall loss of master device.

28. (Currently Amended) A computer-usable ~~storage medium~~ memory having computer-readable program code embodied therein for causing a computer system to perform fault management in a distributed network management station that comprises:

broadcasting, from a first device, an information packet over a network, the information packet indicating whether the first device had a prior status as a master device in a previous operational period;

listening, at the first device, for one or more responses to the information packet from one or more second devices coupled to the network, the one or more responses indicating a current state of the corresponding second devices as either master or slave devices of the network, and a prior status of the corresponding second devices as master devices in previous operational periods, wherein the information packet further comprises information regarding a total system-up-time of the first device and the responses indicate information regarding corresponding total system-up-times of the one or more second devices, the total system-up-times of the first device and the one or more second devices to indicate a total time the corresponding first device or one or more second devices have been in an operational mode; and

~~resolving the status of the first device as the master device or slave device of the network based, at least in part, on any responses received from the one or more second devices coupled to the network~~

comparing the total system-up-times of the first device and the one or more second devices; and

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determining the first device is the master device of the network or the slave device of the network according to the comparison of the total system-up-times.

29. (Currently Amended) The computer-usable ~~storage medium~~-memory of Claim 28, wherein said first device initiates as a slave device.

30. (Currently Amended) The computer-usable ~~storage medium~~-memory of Claim 28, wherein said information packet comprises a participating-device internet protocol (IP) of said first device.

31. (Currently Amended) The computer-usable ~~storage medium~~-memory of Claim 30, wherein said information packet also comprises a participating-device message authentication code (MAC) of said first device.

32. (Currently Amended) The computer-usable ~~storage medium~~-memory of Claim 28, further comprises determining the first device is the master of the network when no responses were received to the information packet.

33. (Currently Amended) The computer-usable ~~storage medium~~-memory of Claim 28, wherein said information packet additionally comprises information regarding a current state of said first device as a slave device of the network; and
determining the first device is the master device of the network based, at least in part, on any responses received from the one or more second devices coupled to the network.

34. (Currently Amended) The computer-usable ~~storage medium~~-memory of Claim 28, further comprises:

comparing the prior status of the first device with the prior status of the one or more second devices received in the response to the information packet when one of the second devices is not currently the master device of the network according to the received responses; and

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determining the first device is the master device of the network or ~~[[a]]~~ the slave device of the network according to the comparison of the prior status of the first device with the prior status of the one or more second devices.

Claim 35. (Canceled)

36. (Currently Amended) The computer-usable ~~storage-medium-memory~~ of Claim 28, wherein said distributed network management station integrates plug-and-play capability of said first device into said network.

37. (Currently Amended) The computer-usable ~~storage-medium-memory~~ of Claim 28, wherein said distributed network management station integrates scalability of said first device into said network.

38. (Currently Amended) The computer-usable ~~storage-medium-memory~~ of Claim 28, wherein said distributed network management station integrates self-healing capabilities of said first device into said network.

39. (Currently Amended) A system comprising:
means for broadcasting, from a first device, an information packet over a network, the information packet indicating whether the first device had a prior status as a master device in a previous operational period;
means for listening, at the first device, for one or more responses to the information packet from one or more second devices coupled to the network, the one or more responses indicating a current state of the corresponding second devices as either master or slave devices of the network, and a prior status of the corresponding second devices as master devices in previous operational periods, wherein the information packet further comprises information regarding a total system-up-time of the first device and the responses indicate information regarding corresponding total system-up-times of the one or more second devices; and

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~~means for resolving the status of the first device as the master device or slave device of the network based, at least in part, on any responses received from the one or more second devices coupled to the network~~

means for comparing the total system-up-times of the first device and the one or more second devices; and

means for determining the first device is the master device of the network or the slave device of the network according to the comparison of the total system-up-times.

Claim 40. (Previously Presented) The system of Claim 39, wherein said first device initiates as a slave device.

Claim 41. (Previously Presented) The system of Claim 39, wherein said information packet comprises a means for participating-device internet protocol (IP) of said first device.

Claim 42. (Previously Presented) The system of Claim 41, wherein said information packet also comprises a means for a participating-device message authentication code (MAC) of said first device.

Claim 43. (Previously Presented) The system of Claim 39, further comprising means for determining the first device is the master of the network when no responses were received to the information packet.

Claim 44. (Previously Presented) The system of Claim 39, wherein said information packet additionally comprises means for providing information regarding a current state of said first device; and

means for determining the first device is the master device of the network based, at least in part, on any responses received from the one or more second devices coupled to the network.

Claim 45. (Previously Presented) The system of Claim 39, further comprising:

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means for comparing the prior status of the first device with the prior status of the one or more second devices received in the response to the information packet when one of the second devices is not currently the master device of the network according to the received responses;

means for determining the first device is the master device of the network or [[a]] the slave device of the network according to the comparison of the prior status of the first device with the prior status of the one or more second devices.

Claim 46. (Canceled)

Claim 47. (Previously Presented) The system of Claim 39, wherein said distributed network management station comprises a means for integrating plug-and-play capability of said first device into said network.

Claim 48. (Previously Presented) The system of Claim 39, wherein said distributed network management station comprises a means for integrating scalability of said first device into said network.

Claim 49. (Previously Presented) The system of Claim 39, wherein said distributed network management station comprises a means for integrating self-healing capabilities of said first device into said network.

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance: The prior art does not provide for, nor suggests wherein the information packet further comprises information regarding a total system-up-time of the first device and the responses indicate information regarding corresponding total system-up-times of the one or more second devices, the total system-up-times of the first device and the one or more second devices to indicate a total time

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the corresponding first device or one or more second devices have been in an operational mode, and comparing the total system-up-times of the first device and the one or more second devices, and determining the first device is the master device of the network or slave device of the network according to the comparison of the total system-up-times.

5. The closest prior art of record is Rune, which discloses how intelligent piconet forming in the Bluetooth network. when connecting a unit to one or more existing ad hoc wireless networks comprising several units, the units e.g. adapted to communicate according to the Bluetooth specification and the network then being formed according to the same specification to comprise one or more piconets, a unit can discover the units which are the masters in the networks, and then connect as a slave to those masters. Rune discloses facilitates the decision of the unconnected unit as to which unit in the network that it should try to connect to. Then, in the actual connecting of the unit to the network, the roles of the unit and of the already connected unit can be chosen by the unit wanting to be connected (see Fig.7), however, the forming the piconet is based on page message to the other Bluetooth devices instead of total system-up-times of the one or more second devices, no disclose comparing the system-up-times of the first device and the one or more second devices, and determining the first device is the master device of the network or slave device of the network according to the comparison of the total system-up-times.

6. The computer-usable storage media as claimed is limited to only those medium which able to physical store data within the medium itself. As described, System 312 also includes data storage features such as a computer usable volatile memory 302, e.g. random access memory (RAM), coupled to bus 300 for storing information and instructions for central processor unit 301, computer usable non-volatile memory 303, e.g. read only memory (ROM), coupled to bus

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300 for storing static information and instructions for the central processor unit 301 and data storage 304 (e.g., a magnetic or optical disk and disk drive) coupled to bus 300 for storing information and instructions. As much , the claimed "computer-usable storage media" as used in the claims in limited only to memory and data storage devices and therefore satisfies the requirements of 35 USC 101.

7. For these reason, in conjunction with the other limitations of the independent claims, put this case in condition for allowance.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GUANG LI whose telephone number is (571)270-1897. The examiner can normally be reached on Monday-Friday 8:30AM-5:00PM(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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10/07/2008

GL

Patent Examiner

/Joseph E. Avellino/

Primary Examiner, Art Unit 2446